Rules in Other Chapters that Cover Confined Spaces

Use with the Confined Spaces book, Chapter 296-809 WAC

General Safety and Health Standards, Chapter 296-24

WAC 296-24-69507, Confined Spaces
WAC 296-24-70007, Work in Confined Spaces
WAC 296-24-71507, Work In Confined Spaces
WAC 296-24-71509 through -71519, Ventilation in Confined Spaces
WAC 296-24-960(10), Working on or near Exposed Energized Parts

Safety Standards for Telecommunication, Chapter 296-32

WAC 296-32-340, Underground lines and cable vaults

Safety Standards for Electrical Workers, Chapter 296-45

WAC 296-45-205, Enclosed Spaces
WAC 296-45-215, Underground Electrical Installations
WAC 296-45-225, Underground Residential Distribution (URD)

Safety Standards for Longshore and Stevedore, Chapter 296-56

WAC 296-56-60053, Hazardous Atmospheres and Substances
WAC 296-56-60235(2), Welding, Cutting (hot work)
WAC 296-56-60235(6), Welding, Cutting (hot work)

Pulp, Paper, and Paperboard Mills and Converters, Chapter 296-79

WAC 296-79-230, Vessel or Confined Area Requirements

Safety Standards for Grain Handling Facilities, Chapter 296-99

WAC 296-99-040, What practices must an employer follow for entry into grain storage structures

Safety Standards for Construction Work, Chapter 296-155

WAC 296-155- 203 and 20307, Confined Spaces
WAC 296-155-280 (1)(b) and 280(5)(d)(ii), Temporary Heating Devices
WAC 296-155-410(7), Welding and Cutting Fire Prevention
WAC 296-155-415(2), Ventilation and Protection in Welding, Cutting, and Heating
WAC 296-155-415(3), Ventilation and Protection in Welding, Cutting, and Heating
WAC 296-155-655, General Protection Requirements
WAC 296-155-657, Requirements for Protective Systems
WAC 296-155 part Q, Underground Construction

Safety Standards for Shipyards, Ship Breaking and Repair, Chapter 296-304

WAC 296-304-01005, Competent Person
WAC 296-304-020 through 02015, Confined and Enclosed Spaces and other dangerous Atmospheres in Shipyard Employment
WAC 296-304-030 through -03009, Surface Preparation and Preservation
WAC 296-304-040 through -04013, Welding, Cutting, and Heating
WAC 296-304-080 through -08011, Tools and Related Equipment

Safety Standards for Fire Fighters, Chapter 296-305

WAC 296-305-05003, Confined Space Rescue Operations

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

This helpful tool will help you do the following for permit-required confined spaces in your workplace:

- Evaluate the type of rescue services you need

  and

- Determine how well rescue services perform

Select and use either on-site rescue teams or off-site rescue services that will minimize the potential for harm to both entrants and rescuers.

For any rescue team or service, your evaluation should consist of the following 2 elements:

- An **initial evaluation** where you decide whether a rescue team or service is adequately trained and equipped to perform the kind of rescues needed at your workplace in a timely manner.
- A **performance evaluation** on the performance of the prospective or existing rescue team or service during an actual or practice rescue.

For example:

> During your initial evaluation you determined that an on-site rescue team would be more expensive but not more effective than an off-site rescue service. As a result, you hire an off-site rescue service.
>
> After observing the off-site rescue service perform a practice rescue, you decide their training or preparedness isn't adequate. You decide to select another rescue service or to form an on-site rescue team.

Initial Evaluation

The following information can help you determine the rescue service needs for your workplace.

For an off-site rescue service you need to, at a minimum, contact the service to plan and coordinate the evaluations required.

The following are examples that **do not** meet the requirements of WAC 296-809-50014, *Make sure you have adequate rescue and emergency services available:*

- Posting a rescue service's number without contacting them
- Planning to rely on 911 emergency services without checking to see if they are able to provide them.

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

Note:

Whether a rescue service meets your workplace needs depends on all of the following:

- The confined spaces from which a rescue may be necessary
- The hazards likely to be encountered in those spaces.
- The number of entrants needing rescue.

Table HT-1 can help you determine whether a rescue service meets your permit-required confined space rescue needs. Use the column labeled "Results" to answer the questions in the"Task" column.

Table HT-1

Initial Evaluation Worksheet

(If you answer no to any of these questions, you need to consider an alternative.)

Task	Results
1. Determine the rescue response time needs for your permit-required confined spaces. Examples: If entering an atmosphere that is potentially or immediately dangerous to life or health (IDLH), the rescue team or service needs to be standing by at the permit-required confined space, ready to enter. If the danger to entrants is restricted to mechanical hazards that can cause injuries such as broken bones or abrasions, a longer response time of 10 or 15 minutes might be acceptable.	_____minutes

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

Task	Results
2. Consider the amount of time required for the rescue service to: • Receive notification • Arrive at the scene To find out how quickly the rescue team or service is able to get from its location to your permit-required confined spaces, you need to consider: - The location of the rescue team or service relative to your workplace - The quality of roads and highways, bottlenecks, or traffic congestion that might be encountered in transit - The reliability of the rescuer's drivers. - The training and skills of the rescuer's drivers. • Set up and be ready for entry.	• Receive notification +_____minutes • Arrive at the scene +_____minutes Comments: • Set up and be ready for entry. +_____minutes =_____minutes Does this amount of time meet your needs from Task 1? Yes ☐ No ☐
3. Determine the availability of the rescue service by considering: a. Is the rescue service available at the times of the day when you will be entering permit-required confined spaces?	Yes ☐ No ☐

Resources

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

Task	Results
b. Are key members of the rescue service available at these times?	Yes ☐ No ☐
c. If the rescue service becomes unavailable while an entry is underway, can they notify you so you can instruct the attendant to abort the entry immediately?	Yes ☐ No ☐
4. Determine if the rescue service meets all of the requirements in the Performance Evaluation Worksheet found in Table HT-2.	Yes ☐ No ☐ If you answered "**yes**" above, how soon can the plan be implemented? _____ If you answered "**no**" and this can't be resolved, then you need to consider an alternative.
5. Determine if a 911 service is willing to perform rescues at your workplace: a. If you call 911, is a responder available?	Yes ☐ No ☐
b. Will the 911 responder be willing to perform rescue?	Rescue ☐ First Aid Only ☐ If you answered "**first aid only**," then an alternative is required.
c. Have you made sure the 911 responders can perform rescues in your spaces?	Yes ☐ No ☐
6. Determine if there is an adequate communication method between the attendant and the prospective rescuer: Can a request for rescue be transmitted without delay?	Yes ☐ No ☐

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

Performance Evaluation

WAC 296-809-50014, Make sure you have adequate rescue and emergency services, requires rescue practice at least once every 12 months if the team or service hasn't successfully performed a rescue within that time. This practice exercise provides you with an opportunity to evaluate the rescue service under conditions similar to your permit-required confined spaces.

First, as part of any practice session, the rescue service or another qualified party should perform a critique of the practice rescue, so that deficiencies can be corrected in:

- Procedures
- Equipment
- Training
- Number of people

Then, you should review the results of the critique and any corrections made for deficiencies identified by a "no" answer in Table HT-2. This will help you determine whether the service could be quickly upgraded to meet your needs.

Table HT-2 will help you determine:

- If the rescue service meets all of the performance requirements in WAC 296-809-50014, Make sure you have adequate rescue and emergency services
  and
- What changes may be necessary.

Use the right column labeled "Results" to answer the questions in the "Task" column.

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

Table HT-2
Performance Evaluation Worksheet
(If you answer no to questions 1-12, you need to take corrective action)

Task	Result
1. Have all team members been trained as entrants, including the potential hazards of all permit-required confined spaces, or of representative spaces, from which rescue may be needed?	Yes ☐ No ☐
2. Can team members recognize the signs, symptoms, and consequences of exposure to any hazardous atmospheres that may be present in those permit-required confined spaces?	Yes ☐ No ☐
3. Is every team member: a. Provided with and properly trained in the use of any PPE that may be needed to perform rescues in the facility, such as air-line respirators or fall arrest equipment?	Yes ☐ No ☐
b. Properly trained to perform functions during rescues, and to use any rescue equipment, such as ropes and backboards, needed in a rescue attempt?	Yes ☐ No ☐
4. Are team members trained in the first-aid and medical skills needed to treat victims injured or overcome by the types of hazards that maybe encountered in the permit spaces at the facility?	Yes ☐ No ☐
5. Do all team members perform their duties safely and efficiently?	Yes ☐ No ☐
6. Do the team members focus on their own safety before considering the safety of the victim?	Yes ☐ No ☐
7. If necessary, can the rescue service properly test the atmosphere to identify acceptable entry conditions?	Yes ☐ No ☐
8. Can the rescue team members identify the information that applies to the rescue from: a. Entry permits	Yes ☐ No ☐
b. Hot work permits	Yes ☐ No ☐
c. Material Safety Datat Sheets (MSDSs)?	Yes ☐ No ☐
9. Has the rescue service been informed of any hazards that may arise from outside the permit-required confined space, such as those caused by future work near the space?	Yes ☐ No ☐

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

Task	Result
10. If necessary, can the rescue service properly rescue injured employees from a permit space that has any of the following:	
a. A limited size opening (less than 24 inches (60.9 cm) in diameter)?	Yes ☐ No ☐
b. Limited internal space?	Yes ☐ No ☐
c. Internal obstacles or hazards?	Yes ☐ No ☐
11. If necessary, can the rescue service safely perform an elevated (high angle) rescue?	Yes ☐ No ☐
12. Determine if the rescue service has a plan for each type of rescue operation at your workplace.	
a. Does the rescue service have a plan for each of the kinds of permit space rescue operations at your workplace?	Yes ☐ No ☐
b. Is the plan adequate for all types of rescue operations that may be needed at your workplace?	Yes ☐ No ☐
13. Rescue practice may occur in representative confined spaces or in the most restrictive spaces. When planning a practice include any of the following features that exist in your permit-required confined spaces:	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐
Space Access **Horizontal** -- The entrance is located on the side of the permit space. Use of retrieval lines could be difficult.	☐ A description is attached.
Vertical -- The entrance is located: - On the top of the permit-required confined space so that rescuers must climb down **or** - The bottom of the permit space so that rescuers must climb up, to enter the space. Rescuers may need special knowledge to safely retrieve an injured entrant.	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐ ☐ A description is attached.

Resources

Evaluating Rescue Teams or Services

Use with the Confined Spaces book, Chapter 296-809 WAC

Entrance Size **Restricted** -- An entrance with a smallest dimension of 24 inches or less. Entrances of this size are too small for a rescuer to enter the space while using a self-contained breathing apparatus, or allow normal spinal immobilization of an injured employee.	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐ ☐ A description is attached.
Unrestricted -- An entrance with a smallest dimension greater than 24 inches. These entrances allow relatively free movement into and out of the permit space.	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐ ☐ A description is attached.
Internal configuration **Open** -- No obstacles, barriers, or obstructions within the space. For example, a water tank.	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐ ☐ A description is attached.
Obstructed -- The space contains some type of obstacle, requiring a rescuer to nameuver around it. For example, a baffle or mixing blade. Large equipment such as a ladder or scaffold brought into a space for work purposes is considered an obstacle if the positioning or size makes rescue more difficult.	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐ ☐ A description is attached.
Elevated -- A space where the entrance is above grade by 4 feet or more. This type of space usually requires knowledge of high angle rescue procedures because it is difficult to package and transport an injured employee to the ground from the entrance.	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐ ☐ A description is attached.
Non-elevated -- A spacewith the entrance located less than 4 feet above grade. The rescue team can transport an injured employee normally.	Is this type of rescue a possible situation at your workplace? Yes ☐ No ☐ ☐ A description is attached.

Sewer System Entry

Use with the Confined Spaces book, Chapter 296-809 WAC

This helpful tool provides additional information on sewer system entries because these entries differ from other confined space entries in the following ways:

- The space usually can't be isolated.
- The atmosphere may suddenly become lethally hazardous, for example toxic, flammable, or explosive atmospheres may enter the work area from another portion of the system.
- Unlike other types of work where entry is rare, a sewer worker's usual work environment is a permit-required confined space.

Entrants

Your designated entrants should be employees who:

- Are thoroughly trained in your sewer entry procedures

  and

- Can demonstrate that they follow entry procedures when entering sewers

Monitoring the Atmosphere

Consider the unique circumstances of your sewer system when preparing for entry, including the unpredictability of the atmosphere. Only you can decide, based upon knowledge and experience, what are the best types of testing instruments for any specific entry operation.

- Make sure entrants are equipped with, and trained to use, atmospheric testing equipment that is capable of identifying at least the following:
  - Oxygen concentrations of less than 19.5%
  - Flammable gas or vapor of 10% or more of the lower flammable limit (LFL)
  - Hydrogen sulfide of 10 parts per million (ppm) or more
  - Carbon monoxide of 35 ppm or more
- The selected testing instruments should be carried and used by the entrants to:
  - Continuously monitor the atmosphere

    and

  - Warn the entrants of any potential atmospheric hazards, in the direction of travel.

- If several entrants are working together in the same immediate location, you will need to decide how many test instruments are required.
- Calibrate atmospheric testing equipment according to the manufacturer's instructions.
- Oxygen or broad range tests are best suited when actual or potential contaminants **have not yet** been identified.
  - Unlike substance-specific tests, these enable overall reading of the hydrocarbons (flammables) present in the space.
  - They don't measure the levels of specific substance contamination.
- Substance-specific tests, which measure levels of specific substances, are important when actual and potential contaminants have been identified. They:
  - Are vitally important when deciding on appropriate entry conditions and proper protection for entrants (for example, with ventilation and personal protective equipment)
  - May not detect other potentially lethal atmospheric hazards when the sewer environment suddenly and unpredictably changes.

Protecting Against Surge Flow and Flooding

To the extent possible, sewer crews should develop and maintain a relationship with the local weather bureau and fire and emergency services. In this way, sewer work may be delayed, or interrupted and entrants withdrawn, whenever the following occur:

- Sewer lines are suddenly flooded by rain or fire suppression activities
- Flammable or other hazardous materials are released into sewers due to industrial emergencies or transportation accidents.

Large Bore Sewers

You may need to use special equipment when entering large bore sewers. This equipment could include the following:

- Self-contained breathing apparatus (SCBA) for escape purposes
- Waterproof flashlights
- Boats, rafts, and personal flotation devices (PFDs)
- Radios
- Rope stand-offs for pulling around bends and corners

Sample Confined Space Entry Permits

Use with Confined Spaces book, Chapter 296-809 WAC

The following 3 fill-in-the-blank confined space entry permits can be modified to fit your particular entry or used as they are if they can fit your entry needs.

You can also design your own entry permit. You're **not** required to use the fill-in-the-blank entry permits provided here.

Sample Confined Space Entry Permits

Use with Confined Spaces book, Chapter 296-809 WAC

Sample 1 (Front)

Date:		
Site location or description:		
Purpose of entry:		
Supervisor(s) in charge of crews:	Phone #:	Type of crew (welding, plumbing, etc):
Permit duration:		
Communication procedures (including equipment):		
Rescue procedures (also see emergency contact phone numbers at end of form):		

REQUIREMENTS COMPLETED (Put N/A if item doesn't apply)	**DATE**	**TIME**	**REQUIREMENTS COMPLETED (Put N/A if item doesn't apply)**	**DATE**	**TIME**
Lockout/De-energize/Try-out			Supplied Air Respirator (N/A if alternate entry)		
Line(s) Broken-Capped-Blank			Respirator(s) (Air Purifying)		
Purge-Flush and Vent			Protective Clothing		
Ventilation			Full Body Harness w/"D" ring		
Secure Area (Post and Flag)			Emergency Escape Retrieval Equipment		
Lighting (Explosive Proof)			Lifelines		
Hotwork Permit			Standby safety personnel (N/A if alternate entry)		
Fire Extinguishers			Resuscitator-Inhalator (N/A if alternate entry)		
Add other specific information, if needed, or attach additional instructions or requirements. See the following examples in bold print.					
Line(s) to be bled/blanked:					
Ventilation equipment:					
PPE clothing:					
Respirator(s):					
Fire extinguisher(s):					
Emergency retrieval equipment:					

Sample Confined Space Entry Permits

Use with Confined Spaces book, Chapter 296-809 WAC

Sample 1 (Back)

AIR MONITORING									
Substance Monitoring	**Permissible Levels**		**Monitoring Results**						
Time monitored (put time) Percent Oxygen	Record the time 19.5% to 23.5%								
LEL/LFL	Under 10%								
Toxic 1:	____PEL	___STEL							
Toxic 2:	____PEL	___STEL							
Toxic 3:	____PEL	___STEL							
Toxic 4:	____PEL	___STEL							
REMARKS:									

Air Tester Name	**ID#**	**Instrument(s) Used** (For example: oxygen meter, combustible gas indicator, etc.)	**Model# or Type**	**Serial# or Unit**

ATTENDANTS AND ENTRANTS			
Attendant(s) (Required for all confined space work except alternate entry)	**ID#**	**Confined Space Entrant(s)**	**ID#**

REMARKS:

SUPERVISOR AUTHORIZATION - ALL CONDITIONS SATISFIED

Department or phone number:

EMERGENCY CONTACT PHONE NUMBERS:

AMBULANCE _____ FIRE: _____ SAFETY: _____ RESCUE TEAM: _____ OTHER: _____

Sample Confined Space Entry Permits

Use with Confined Spaces book, Chapter 296-809 WAC

Sample 2 (Front)

Date and time issued:				Date and time expires:
Job site/space I.D.:				Job supervisor
Equipment to be worked on:				Work to be performed:
Standby personnel:				
1. Atmospheric Checks:				Time: _____
Oxygen	_____			%
Explosives	_____			% L.F.M.
Toxic	_____			PPM
2. Tester's signature: _____				
3. Source isolation (No Entry):		N/A	Yes	No
Pumps or lines blinded, disconnected, or blocked:		☐	☐	☐
4. Ventilation modification:		N/A	Yes	No
Mechanical:		☐	☐	☐
Natural Ventilation only:		☐	☐	☐
5. Atmospheric check after isolation and ventilation:				
Oxygen:	_____%	>19.5%		
Explosive:	_____% L.F.M.	<10%		
Toxic:	_____ PPM	<10PPM H_2S		
Time:	_____			
Tester's signature:	_____			
6. Communication procedures: _____ _____				
7. Rescue procedures: _____ _____				

Resources

Sample Confined Space Entry Permits

Use with Confined Spaces book, Chapter 296-809 WAC

Sample 2 (Back)

8. Entry standby and backup persons successfully completed required training?		YES ☐	NO ☐
Is it current?		☐	☐
9. Equipment:	N/A	YES	NO
Direct reading gas monitor-tested:	☐	☐	☐
Safety harnesses and lifelines for entry and standby persons:	☐	☐	☐
Hoisting equipment:	☐	☐	☐
Powered communications:	☐	☐	☐
SCBA's for entry and standby persons:	☐	☐	☐
Protective clothing:	☐	☐	☐
All electric equipment listed: Class I, Division I, Group D and non-sparking tools	☐	☐	☐

10. Periodic atmospheric tests:

Oxygen	_____%	Time _____	Oxygen	_____%	Time _____
Oxygen	_____%	Time _____	Oxygen	_____%	Time _____
Explosive	_____%	Time _____	Explosive	_____%	Time _____
Explosive	_____%	Time _____	Explosive	_____%	Time _____
Toxic	_____%	Time _____	Toxic	_____%	Time _____
Toxic	_____%	Time _____	Toxic	_____%	Time _____

We have reviewed the work authorized by this permit and the information contained here. Written instruction and safety procedures have been received and are understood. Entry cannot be approved if any squares are marked in the "No" column. This permit not valid unless all appropriate items are completed.

Permit prepared by (Entry supervisor):		
Approved by (Unit Supervisor):		
Reviewed by (Operations Manager):	Printed name	Signature

This permit is to be kept at the job site. Return this job site copy to the unit supervisor following job completion.

Entrants Name	Sign in	Sign out	Sign in	Sign out

Sample Confined Space Entry Permits

Use with Confined Spaces book, Chapter 296-809 WAC

Sample 3 (Front)

PERMIT VALID FOR 8 HOURS ONLY. ALL PERMIT COPIES MUST REMAIN AT THE SITE UNTIL JOB IS COMPLETED.		
Date:	Site location/description:	
Purpose of entry:		
Supervisor(s) in charge of crews	Type of Crew	Telephone#
Communication procedures:		
Rescue procedures (telephone number on back):		

BOLD INDICATES MINIMUM REQUIREMENTS TO COMPLETE AND REVIEW PRIOR TO ENTRY
Note: For Items that do not apply, enter N/A in the blank.

REQUIREMENTS COMPLETED	**DATE**	**TIME**	**REQUIREMENTS COMPLETED**	**DATE**	**TIME**
Lockout/De-energize/Tagout			**Full Body Harness w/"D" Ring**		
Line(s) Broken-Capped-Blank			**Emergency Escape Retrieval Equipment**		
Purge-Flush and Vent			**Lifelines**		
Ventilation			Fire Extinguishers		
Secure Area (Post and Flag)			Lighting (Explosive proof)		
Breathing Apparatus			Protective Clothing		
Resuscitator-Inhalator			Respirator(s) (Air Purifying)		
Standby Safety Personnel			Burning and Welding Permit		

Continuous Monitoring: Yes ☐ No ☐

Periodic Monitoring Frequency: _____

TEST(S)	**PERMISSIBLE ENTRY LEVEL**
Percent of oxygen	**19.5% TO 23.5%**
Lower flammable limit	**Under 10%**
Carbon monoxide	**+35 PPM**
Aromatic Hydrocarbon	+1 PPM *5 PPM
Hydrogen Cyanide	(Skin) *4 PPM
Hydrogen Sulfide	+10 PPM *15 PPM
Sulfur Dioxide	+2 PPM *5 PPM
Ammonia	+35 PPM

* Short-term exposure limit: Employees can work in the area up to 15 minutes.
\+ 8 hour Time Weighted Average: Employees can work in the area 8 hours (longer with appropriate respiratory protection).

REMARKS: _____

Sample Confined Space Entry Permits

Use with Confined Spaces book, Chapter 296-809 WAC

Sample 3 (Back)

Gas tester name & check #:	Instructions used	Model and/or type:	Serial and/or unit #:

SAFETY STANDBY IS REQUIRED FOR ALL CONFINED SPACE WORK

Safety Standby Person(s)	Check#	Confined Space Entrant	Check#

SUPERVISOR AUTHORIZATION - ALL CONDITIONS SATISFIED:

Department or phone number: _____

EMERGENCY CONTACT PHONE NUMBERS:

Ambulance: _____

Fire: _____

Safety: _____

Gas coordinator: _____

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

These example confined space entry programs are provided for your information, and to help you determine the information needed for your program.

To develop an effective program for your facility or work environment, you will need to identify work conditions both typical to your industry and unique to your workplace. You also need to consider other rules. For a list of rules in other chapters that cover confined spaces, see the Resources section of the Confined Spaces book.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

EXAMPLE CONFIED SPACE ENTRY PROGRAM FOR SEWER ENTRY

The sections that follow apply only to permit-required confined space entry. The information on alternate entry has been identified with a title.

POTENTIAL HAZARDS

Check the boxes after you have reviewed your workplace for these hazards.

Employees could be exposed to the following:

☐ **Engulfment and drowning**

☐ **Presence of toxic gases**

Equal to or more than 10 ppm hydrogen sulfide measured as an 8-hour time-weighted average. If the presence of other toxic contaminants is suspected, specific monitoring programs will be developed.

☐ **Presence of explosive/flammable gases**

Equal to or greater than 10% of the lower flammable limit (LFL)

☐ **Oxygen deficiency**

A concentration of oxygen in the atmosphere equal to or less than 19.5% by volume.

ENTRY PERMITS

Review the information in this section.

- All sewers are considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise.
- Any employee required or permitted to pre-check or enter a sewer has successfully completed, at a minimum, the training outlined in our training procedures.
- A written copy of operating and rescue procedures as required by these procedures is at the worksite for the duration of the job.
- The sewer entry permit is completed before approval can be given to enter a sewer.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ENTRY PERMITS (Continued)

- The permit verifies completion of items required to protect employees.
- The permit is kept at the job site for the duration of the job.
- If circumstances cause an interruption in the work or a change in the alarm conditions for which entry was approved, a new sewer entry permit needs to be completed.

CONTROL OF ATMOSPHERIC AND ENGULFMENT HAZARDS

Review the information in this section.

Surveillance

- The surrounding area is surveyed to avoid hazards such as drifting vapors from tanks, piping, or sewers.

Testing

- The sewer atmosphere is tested to determine whether dangerous air contamination or oxygen deficiency exists.
- A direct reading gas monitor is used.
- Testing is performed by a supervisor who has successfully completed the gas detector training for the monitoring method used.
- The minimum parameters to be monitored are oxygen deficiency, Lower Flammable Level (LFL), and hydrogen sulfide concentration.
- A written record of the pre-entry test results is made and kept at the worksite for the duration of the job.
- Affected employees are able to review the testing results.
- The most hazardous conditions will determine when work is being performed in 2 adjoining, connected spaces.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

CONTROL OF ATMOSPHERIC AND ENGULFMENT HAZARDS (Continued)

Space ventilation

- Mechanical ventilation systems, where required, are set at 100% of the outside air.
- Where possible, open additional manholes to increase air circulation.
- Use portable blowers to increase natural circulation if needed.
- After a suitable ventilation period, repeat the testing.
- Entry may not begin until testing has demonstrated that the hazardous atmosphere has been eliminated or controlled.

ENTRY PROCEDURES

Review the information in this section.

Table HT-1
Entry Procedures for Confined Space Conditions

If you have any of the following conditions	Then follow these procedures
Testing demonstrates the existence of dangerous or deficient conditions and additional ventilation can't reduce concentrations to safe levels	- All personnel are trained - A self-contained breathing apparatus is worn by any person entering the sewer. - At least one worker stands by the outside of the sewer ready to give assistance in case of emergency. - The rescue workers has a self-contained breathing apparatus available for immediate use. - There is at least one additional worker within sight or call of the standby worker. - Continuous powered communications is maintained between the worker within the sewer and standby personnel.
The atmosphere tests as safe but unsafe conditions can reasonably be expected to develop	
It isn't feasible to provide for immediate exit from spaces equipped with automatic fire suppression systems and it isn't practical or safe to deactivate such systems	
An emergency exists and it isn't feasible to wait for pre-entry procedures to take effect	

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ALTERNATE ENTRY

Review the information in this section.

Certification

- Sewers may be entered without the need for a written permit or attendant if the space can be maintained in a safe condition for entry by mechanical ventilation alone.
- All sewers are considered permit-required confined spaces until the pre-entry procedures demonstrate otherwise.
- Any employee required or permitted to pre-check or enter a sewer will have successfully completed, at a minimum, the training outlined in our training procedures.
- A written copy of operating and rescue procedures as required by these procedures needs to be at the worksite for the duration of the job.
- The sewer pre-entry checklist is completed by the lead worker before entry into a sewer. This list verifies completion of items listed below. This checklist is kept at the job site for the duration of the job.
- If circumstances dictate an interruption in the work, reevaluate the sewer and complete a new checklist .

Control of atmospheric and engulfment hazards

- Pumps and lines:
  - All pumps and lines which may reasonably cause contaminants to flow into the sewer are disconnected, blinded, and locked out, or effectively isolated by other means to prevent development of dangerous air contamination or engulfment.
  - Not all lateral lines to sewers or storm drains require blocking. However, where experience or knowledge of use indicates a reasonable potential for contamination of air or engulfment into an occupied sewer, then all affected lateral lines are to be blocked.
  - If blocking or isolation requires entry into the sewer, the provisions for entry into a permit-required confined space are implemented.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ALTERNATE ENTRY (Continued)

- Surveillance:
  - The surrounding area is surveyed to avoid hazards such as drifting vapors from the tanks, piping, or sewers.

- Testing:
  - The atmosphere within the sewer will be tested to determine whether dangerous air contamination or oxygen deficiency exists.
  - Detector tubes, alarm only gas monitors, and explosion meters are examples of monitoring equipment that may be used to test sewer atmospheres.
  - Testing is performed by a lead worker who has successfully completed the gas detector training for the monitoring method to be used.
  - The minimum parameters to be monitored are oxygen deficiency, LFL, and hydrogen sulfide concentration.
  - A written record of the pre-entry test results are made and kept at the worksite for the duration of the job.
  - The supervisor will certify in writing, based upon the results of the pre-entry testing, that all hazards have been eliminated or controlled.
  - Affected employees are able to review the testing results.
  - The most hazardous conditions will determine when work is being performed in 2 adjoining, connecting spaces.

Entry procedures

When entering without a permit or an attendant, entry into and work within may proceed if:

- There are no non-atmospheric hazards present
- The pre-entry tests show there is no dangerous air contamination or oxygen deficiency within the space; and there is no reason to believe that any is likely to develop
- Continuous testing of the atmosphere in the immediate vicinity of the workers within the space is accomplished

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ALTERNATE ENTRY (Continued)

- Workers will immediately leave the sewer when any of the gas monitor alarm set points are reached as defined
- Workers won't return to the area until a supervisor who has completed the gas detector training has used a direct reading gas detector to evaluate the situation and has determined that it's safe to enter.
- If you are entering a space without a permit or an attendant
  - Arrangements for rescue services aren't required for entries that don't require a permit.
  - See the “rescue” section for instructions regarding rescue planning where an entry permit is required.

RESCUE

- Review the information in this section and check the boxes that apply.
  - ☐ Call the local rescue services for rescue.
  - ☐ Rescue entries into sewers are made only by trained and properly equipped personnel.
  - ☐ If immediate hazards to injured personnel are present, workers at the site implement emergency procedures without entering the sewer.
  - ☐ Continuous gas monitoring is performed during all sewer entry operations. If alarm conditions occur, entry personnel exit the sewer and a new sewer entry permit is issued.
  - ☐ When dangerous air contamination is attributable to flammable or explosive substances, lighting and electrical equipment needs to be Class 1, Division 1 rated per National Electrical Code (NEC) and no ignition sources may be introduced into the area.
  - ☐ When it's practical, the full-body harness is used to suspend a person upright and a hoisting device or similar apparatus is available for lifting workers out of the sewer.
  - ☐ If at any time the use of a hoisting device or full-body harness and attached lifeline may endanger the worker, their use may be discontinued.

RESCUE (Continued)

- Review and follow the requirements for any of the situations in Table HT-2, Procedures for Removing Workers from Sewers.

Table HT-2
Procedures for Safely Removing Workers from Sewers

If	Then
There is any questionable action or non-movement by the worker inside	• Perform a verbal check. • Immediately remove the worker from the sewer if there is no response or a questionable response from them
The worker is disabled due to falling or impact	• Don't remove the worker from the sewer unless there is immediate danger to the worker's life. • Notify local rescue personnel immediately. • Make sure the standby worker doesn't enter the sewer in this case. • Only trained rescue personnel (wearing self contained breathing apparatus-SCBA) may enter to perform a rescue. • Make sure all workers entering the space use a full-body harness with attached lifeline with the free end of the line secured outside the entry opening. • Make sure the standby worker uses the lifeline to attempt to rescue a disabled worker without entering the space and summons rescue services based on their assessment of the situation.

EXAMPLE CONFINED SPACE ENTRY PROGRAM FOR MEAT AND POULTRY RENDERING PLANTS

Cookers and dryers are horizontal, cylindrical vessels equipped with a center, rotating shaft and agitator paddles or discs. If the inner shell is jacketed, it is usually heated with steam at pressures up to 150 psig (1034.25 kPa). The rotating shaft assembly of the continuous cooker or dryer is also steam heated.

Cooker and dryer operations can be either batch or continuous. Multiple batch cookers are operated in parallel. When one unit of a multiple set is shut down for repairs, make means available to isolate that unit from the others which remain in operation.

POTENTIAL HAZARDS

Check the boxes after you have reviewed your workplace for these hazards.

The recognized hazards associated with cookers and dryers include the risk that employees could be:

- ☐ Struck or caught by rotating agitator.
- ☐ Engulfed in raw material or hot, recycled fat.
- ☐ Burned by steam from leaks into the cooker/dryer steam jacket or the condenser duct system if steam valves aren't properly closed and locked out.
- ☐ Burned by contact with hot metal surfaces, such as the agitator shaft assembly, or inner shell of the cooker/dryer.
- ☐ Subjected to heat stress caused by warm atmosphere inside cooker/dryer.
- ☐ Injured by slipping and falling on grease in the cooker/dryer.
- ☐ Electrically shocked by faulty equipment taken into the cooker/dryer.
- ☐ Burned or overcome by fire or products of combustion.
- ☐ Overcome by fumes generated by welding or cutting done on grease covered surfaces.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

POTENTIAL HAZARDS (Continued)

Permits

- The supervisor is always present at the cooker/dryer or other permit entry confined space when entry is made.
- The supervisor:
  - Follows the pre-entry isolation procedures described in the entry permit when preparing for entry

    and

  - Makes sure the protective clothing, ventilating equipment, and any other equipment required by the permit are at the entry site.

- The permit specifies how isolation is accomplished and any other preparations needed before making entry. This is especially important in parallel arrangements of cooker/dryers so you don't have to shut down the entire operation to allow safe entry into one unit.

CONTROL OF HAZARDS

Check the boxes that apply after you have addressed the hazards below.

Mechanical

- ☐ Lock out main power switch to agitator motor at main power panel.
- ☐ Affix tag to the lock to inform others that a permit confined space entry is in progress.

Engulfment

- ☐ Close all valves in the raw material blow line.
- ☐ Secure each valve in its closed position using chain and lock.
- ☐ Attach a tag to the valve and chain warning that a permit confined space entry is in progress.
- ☐ The same procedure is used for securing the fat recycle valve.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

CONTROL OF HAZARDS (Continued)

Burns and heat stress

- ☐ Close steam supply valves to jacket and secure with chains and tags.
- ☐ Insert solid blank at flange in cooker vent line to condenser manifold duct system.
- ☐ Vent cooker/dryer by opening access door at discharge end and top center door to allow natural ventilation throughout the entry.
- ☐ If faster cooling is needed, use a portable ventilation fan to increase ventilation.
- ☐ Cooling water may be circulated through the jacket to faster reduce both outer and inner surface temperatures of cooker/dryers.
- ☐ Check air and inner surface temperatures in cooker/dryer to assure they are within acceptable limits before entering, or use proper protective clothing.

Fire and fume hazards

- ☐ Careful site preparation, such as cleaning the area within 4 inches (10.16 cm) of all welding or torch cutting operations, and proper ventilation are the preferred controls.
- ☐ All welding and cutting operations are required to be done based on WISHA's Welding standard, chapter 296-24 WAC, Part I, Welding, cutting, and brazing (found in another book).
- ☐ Proper ventilation may be achieved by local exhaust ventilation, or the use of portable ventilation fans, or a combination of the 2 practices.

Electrical shock

- ☐ Electrical equipment used in cooker/dryers needs to be in serviceable condition.

Slips and falls

- ☐ Remove residual grease before entering cooker/dryer.

Attendant

- ☐ The supervisor is the attendant for employees entering cooker/dryers.

Rescue

- ☐ When necessary, the attendant calls the employer's trained rescue team or the local fire services as previously.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

EXAMPLE CONFINED SPACE ENTRY PROGRAM FOR WORKPLACES WHERE PORTABLE TANKS ARE FABRICATED OR SERVICED

During fabrication

These tanks and dry-bulk carriers are entered repeatedly throughout the fabrication process. These products aren't configured identically, but the manufacturing processes by which they are made are very similar.

Sources of hazards

In addition to the mechanical hazards arising from the risks that an entrant would be injured due to contact with components of the tank or the tools being used, there is also the risk that a worker could be injured by breathing fumes from welding materials or mists or vapors from materials used to coat the tank interior. In addition, many of these vapors and mists are flammable, so the failure to properly ventilate a tank could lead to a fire or explosion.

Control of hazards

- Welding
  - Use local exhaust ventilation to remove welding fumes once the tank or carrier is completed to the point that workers may enter and exit only through a manhole. (Follow the requirements of chapter 296-24 WAC, Part I, Welding, Cutting and Brazing, found in another chapter).
  - Don’t ever bring welding gas tanks into a tank or carrier that's a permit entry confined space.
- Application of interior coatings/linings
  - Control atmospheric hazards by forced air ventilation sufficient to keep the atmospheric concentration of flammable materials below 10% of the lower flammable limit (LFL) (or lower explosive limit (LEL), whichever term is used locally).
  - Provide the appropriate respirators and use them in addition to providing forced ventilation when the forced ventilation doesn’t maintain acceptable respiratory conditions.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

Permits

Because of the repetitive nature of the entries in these operations, an “area entry permit” will be issued to cover production areas where tanks are fabricated so that entry and exit are through manholes.

Authorization

Only the area supervisor may authorize an employee to enter a tank within the permit area. The area supervisor determines that conditions in the tank trailer, dry-bulk trailer, or truck, for example, meet permit requirements before authorizing entry.

Attendant

- The area supervisor designates an employee to maintain communication by employer specified means with employees working in tanks to make sure they’re safe.
- The attendant may not enter any permit confined space to rescue an entrant or for any other reason, unless authorized by the rescue procedure and, and even then, only after calling the rescue team and being relieved by an attendant by another worker.

Communications and observation

- Communications between the attendant and entrants has to be maintained throughout entry.
- Methods of communication that may be specified by the permit include voice, voice-powered radio, tapping or rapping codes on tank walls, and signaling tugs on a rope.
- The attendant’s need to observe the work activities such as chipping, grinding, welding, spraying, for example, that require deliberate operator control to make sure they continue normally.
- These activities often generate so much noise that the necessary hearing protection makes communication by voice difficult.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

Rescue Procedures

Acceptable rescue procedures include entry by a team of employee-rescuers, use of public emergency services, and procedures for breaching the tank.

- The area permit specifies which procedures are available, but the area supervisor makes the final decision based on circumstances.

Note:

Certain injuries may make it necessary to breach the tank to remove a person rather than risk additional injury by removal through an existing manhole.

- The supervisor makes sure that no breaching procedure used for rescue would violate terms of the entry permit.
- For example, if the tank has to be breached by cutting with a torch, the tank surfaces to be cut need to:
  - Be free of volatile or combustible coatings within 4 inches (10.16 cm) of the cutting line

    and
  - The atmosphere within the tank has to be below the LFL.

Retrieval line and harnesses

- The retrieval lines and harnesses generally required under this rule are usually impractical for use in tanks. The internal configuration of the tanks and their interior baffles and other structures would prevent rescuers from hauling out injured entrants.
- However, unless the rescue procedure calls for breaching the tank for rescue, the rescue team needs to be trained in the use of retrieval lines and harnesses for removing injured employees through manholes.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

REPAIR OR SERVICE OF "USED" TANKS AND BULK TRAILERS

Sources of hazards

In addition to facing the potential hazards encountered in fabrication or manufacturing, tanks or trailers which have been in service may contain residues of dangerous materials, whether left over from the transportation of hazardous cargoes or generated by chemical or bacterial action on residues of non-hazardous cargoes.

Control of atmospheric hazards

A "used" tank needs to be brought into areas where tank entry is authorized only after the tank has been emptied, cleansed of any residues without employee entry, and purged of any potential atmospheric hazards.

Welding

- In addition to tank cleaning for control of atmospheric hazards, coating and surface materials need to be:
  - Removed 4 inches (10.16 cm) or more from any surface area where welding or other torch work will be done

    and
  - Make sure the atmosphere within the tank remains well below the LFL.
- Follow the requirements of chapter 296-24 WAC, Part I, Welding, Cutting and Brazing, found in a separate book, at all times.

Permits

- An entry permit needs to be issued prior to authorization of entry into used tank trailers, dry-bulk trailers, or trucks.
- In addition to the pre-entry cleaning requirement, this permit needs to require the employee safeguards specified for new tank fabrication or construction permit areas.

Authorization

- Only the area supervisor may authorize an employee to enter a tank trailer, dry-bulk trailer, or truck within the permit area.
- The area supervisor determines that the entry permit requirements have been met before authorizing entry.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

This helpful tool gives you examples of confined space entry programs, including a fill-in-the-blank form, for different workplace situations. The examples are provided to help you determine what information to include in a program for your workplace.

The examples include:

- A fill-in-the-blank template
- 3 examples showing content information to consider for the following specific workplaces:
  - Sewer spaces
  - Meat and poultry rendering plants
  - Portable tank fabricating or servicing

You are responsible for implementing and maintaining your written program.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

FILL-IN-THE-BLANK TEMPLATE

The following is a fill-in-the-blank template for a confined space entry program. You are responsible for:

- Providing the actual content

  and

- Implementing and maintaining your written program.

Complete this document by adding your specific information to meet the requirements of WAC 296-809-30002, *Develop a Written Permit-required Confined Space Program.*

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

(Insert company name)

CONFINED SPACE ENTRY PROGRAM

OVERVIEW

This confined space entry program:

- Identifies all permit-required confined spaces in our workplace
  and
- Describes our procedures for worker safety and health in permit-required confined spaces

Employees will participate in developing and implementing the program in the following ways:

(Insert how your employees will participate) _____

_____

_____

_____

*(Insert company name)*_____ will treat all confined spaces as permit-required spaces until they have been evaluated **and** are documented to be nonpermit.

ROLES & RESPONSIBILITIES

The following shows which employees are responsible for the tasks outlined:

For information only
Remove this box from your completed program

In addition to the roles below, you may want to designate:

- Someone with overall responsibilities for your program
  or
- One person with all the responsibilities.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ROLES & RESPONSIBILITIES (Continued)

Responsibility:	Person assigned this responsibility:
Evaluate our work locations and determine: [Check appropriate box(es)] ☐ Confined space(s) exist at the worksite. ☐ Permit-required confined space(s) exist at the worksite.	
Evaluate the confined space(s) to determine whether hazards are present.	
Evaluate hazards and determine the appropriate entry procedure for the space. **Note:** • Until evaluated and documented otherwise, all confined spaces will be considered permit-required spaces. • Alternate entry procedure may apply when the only hazard remaining in the space is a potential hazardous atmosphere controlled by the use of forced air ventilation.	
Re-evaluate the space when the use, configuration, or hazards of a confined space change.	

Monitoring and testing as follows:
• Conduct initial monitoring to identify and evaluate any potentially hazardous atmospheres
• Complete atmospheric testing in the following order:
  ◦ Oxygen
  ◦ Combustible gases
  ◦ Toxic gases and vapors
• Record the data (specify location)_____
• Keep these records on-site in (specify location)_____
_____
_____	

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ROLES & RESPONSIBILITIES (Continued)

Responsibility:	Person assigned this responsibility:
Inform exposed or potentially-exposed employees of the existence and hazards of confined spaces using the methods described below under "Control Confined Space Entry."	
Provide employees entering confined spaces, or their designated representative, an opportunity to observe pre-entry testing and any subsequent testing. - All test results will be provided to the entrants or their representatives upon request. - The space will be re-evaluated if entrants or their representatives believe that the permit space was inadequately tested.	
Make sure that all equipment needed for safe entry into any confined space is available and in proper working order.	
Conduct a review using the canceled entry permits to identify and correct any deficiencies in our program.	

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

IDENTIFY CONFINED SPACES AND HAZARDS

For information only
Remove this box from your completed program

If you have a list of confined spaces and their hazards, you can attach it instead of completing this table.

Confined Spaces and Hazards

Confined Space (name or number)	**Type of Space** (tank,hopper, sump, pit, etc.)	**Location**	**Hazards**
(Insert your confined space information)			

CONTROL OF CONFINED SPACE ENTRY

We use the following method(s) to inform employees about the existence and hazards of confined spaces, and prevent unauthorized entry:

(Check appropriate box(es))

☐ Posting danger signs at each permit space reading "Danger-Confined Space - Do Not Enter"

(Insert additional means you use to prevent entry) _____

_____

_____

_____

For information only
Remove this box from your completed program

The methods used to prevent entry must be effective. The following are examples of effective methods:

- Using barriers
- Specialized tools under management's control to open the space
- Supplementing these measures with training and signs

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

PERMIT ENTRY PROCEDURES

Our entry procedures for permit spaces include the following:

For information only
Remove this box from your completed program

Examples of entry permits are included in the resource section.

You may have multiple entry procedures. Specific examples of some of the procedures you may use to enter and complete work include the following:

- Procedure 001 Lockout/Tagout (LOTO)
- Procedure 002 Atmospheric monitoring
- Procedure 003 Job Hazard Analysis

ALTERNATE ENTRY PROCEDURES

For information only
Remove this box from your completed program

Complete this section **only** when using alternate entry.

Our permit spaces that have as their only hazard an actual or potential hazardous atmosphere may use alternate entry procedures. These alternate entry procedures don't require the use of an entry permit.

Alternate entry procedures can be used for the spaces listed in the following table:

Confined Space Name or Number	Hazards	Method of Hazard Elimination	Potential Hazardous Atmosphere	Ventilation Equipment Required
(insert your specific information)				

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ALTERNATE ENTRY PROCEDURES (Continued)

We will do all of the following when using alternate entry procedures:

- Eliminate unsafe conditions before removing entrance covers.
  - After removing entrance covers, promptly guard the opening with a railing, temporary cover, or other temporary barrier to prevent accidental falls through the opening and protect entrants from objects falling into the space.
  - Certify that pre-entry measures have been taken (such as safe removal of the cover and having protection needed to gather pre-entry data), with the date, location of the space, and signature of the person certifying.
  - Make the pre-entry certification available to each entrant before entry.
- Before an employee enters the confined space, test the internal atmosphere with a calibrated, direct-reading instrument for all of the following, in this order:
  1. Oxygen content
  2. Flammable gases and vapors
  3. Potential toxic air contaminants.
- Provide entrants, or their authorized representatives, with an opportunity to observe the pre-entry and periodic testing.
  - Make sure the atmosphere within the space isn't hazardous when entrants are present.
- Use continuous forced air ventilation, as follows:
  - Wait until the forced air ventilation has removed any hazardous atmosphere before allowing entrants into the space.
  - Direct forced air ventilation toward the immediate areas where employees are, or will be, and continue ventilation until all employees have left the space.
  - Provide the air supply from a clean source and make sure it doesn't increase hazards in the space.
- Test the atmosphere within the space as needed to make sure hazards don't accumulate.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ALTERNATE ENTRY PROCEDURES (Continued)

- If a hazardous atmosphere is detected during entry, we will do all of the following:
  - Evacuate employees from the space immediately.
  - Evaluate the space to determine how the hazardous atmosphere developed.
  - Implement measures to protect employees from the hazardous atmosphere before continuing the entry operation.
  - Verify the space is safe for entry before continuing the entry operation.
- The written documentation is available to each employee entering the space or to that employee's representative at the confined space bulletin board.

CLASSIFY A CONFINED SPACE AS A NON-PERMIT SPACE

For information only
Remove this box from your completed program

Complete this section **only** when you classify a space as non-permit.

See Non-permit Space Documentation Form in this section.

- A space will be classified non-permit only for as long as all the hazards remain eliminated.
- If someone must enter the space to eliminate of any of the hazards, we will follow all the requirements listed under the permit entry procedures.
- Documentation that no permit-required confined space hazards exist will include the following:
  - The date, location, and signature of the person making the determination.
  - How we determined that no permit-required confined space hazards exist.
  - Documentation will be available to entrants or their authorized representatives by posting at the entry to the space.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

CLASSIFY A CONFINED SPACE AS A NON-PERMIT SPACE (Continued)

The following spaces can be classified as non-permit spaces by following the listed methods of hazard elimination:

Date	Location of Confined Space	Hazards	Method of Hazard Elimination
(input your specific information)			

NON-PERMIT SPACE DOCUMENTATION FORM

Non-permit confined space name or number	(input your specific information)
Location	
Documentation	
Date	
Signature	

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

TRAINING

- We will provide permit space training to employees at the following times:
  - When hired, so new employees are aware of our confined spaces
  - Before they are assigned permit space entry duties
  - When their assigned duties change

    and
  - When there is a change in a space that creates hazards for which they haven't been trained.

For information only
Remove this box from your completed program

Following are 6 basic categories of training, based on duties and potential exposure:

1. Awareness training provided to all employees potentially exposed to permit spaces, covering the following:
   a. The location and hazard of each space
   b. The company program for confined spaces
   c. Emphasis on not entering the space for any reason.
2. Entry and exit training for the following team members:
   a. Entrants
   b. Attendants
   c. Supervisors
   d. Rescue team members
3. Training on how to manage confined space entries for entry supervisors.
4. Rescue training for rescue team members.
5. Pre-entry procedure training for all:
   a. Entrants
   b. Supervisors
   c. Attendants
   d. Rescue team members
6. Training on evaluating and testing confined spaces for:
   a. Entry supervisors
   b. Staff assigned to test and evaluate the space
7. Retraining for employees when you have any reason to believe they aren't proficient at their confined space duties.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

OUR RESPONSIBILITIES FOR CONTRACTORS

For information only
Remove this box from your completed program

Complete this section **only** when you hire a contractor to work in your confined space(s).

A copy of this Confined Space Entry Program will be provided to each contractor involved in permit space entry work at our company. Each contractor will be briefed on the following:

- The location of the permit spaces at our facility.
- Entry into permit spaces is only allowed by following the written entry program.
- The reasons for listing the space as a permit space, including both of the following:
  - The identified hazards
  - Our experience with the particular space.
- Precautions we have implemented to protect employees working in or near the space.
- Who will debrief the contractor at the completion of entry operations, or during entry if needed, on whether any hazards were confronted or created during their work.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

OUR RESPONSIBILITIES WITH HOST EMPLOYERS

For information only
Remove this box from your completed program

Complete this section **only** when you are a contractor working in someone else's confined space(s).

Our entry supervisor will do the following to make sure entry operations are coordinated with host employers:

- Obtain any information on the hazards of the permit space and information from previous entry operations
- Determine if other workers will be working in or near the space.
- Coordinate entry operations with other workers
- Inform the host employer of the permit space program that we follow.
- Hold a debriefing conference at the completion of the entry operation, or during the entry operation if needed, to inform the host employer of any hazards confronted or created during work in the space.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

RESCUE AND EMERGENCY SERVICES

We have developed the following rescue and emergency action plan:

For information only
Remove this box from your completed program

1. Insert your specific company rescue and emergency plan here.
2. For more information about rescue from confined spaces, see the Helpful Tool, Evaluating Rescue Teams or Services.
3. You need to use non-entry rescue procedures and equipment, unless this would increase the risk of injury ot the entrant or would be ineffective.
4. For entry rescue, see Entry Rescue Plans in this section.
5. This section is not required for the following confined space entries:
   - Classified and documented non-permit spaces.
   - Proper use of alternate entry procedures.

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ENTRY RESCUE PLANS

Following are 3 options for you to consider when developing rescue plans as outlined in the helpful tool, Evaluating Rescue Teams or Services, which is located in the Resources section of the Confined Spaces book.

OPTION 1

The entry supervisor will contact (name of rescue service)_____ at (phone number) _____ to do both of the following:

- Coordinate entry
- Schedule an entry date and time.

OPTION 2

Complete the following information.

Train employees on the specific procedures for summoning the rescue and emergency services.

Name of rescue service: _____

Telephone number: _____

Location: _____

Approximate response time: _____

Name of emergency medical service: _____

Telephone number: _____

Location: _____

Approximate response time: _____

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

ENTRY RESCUE PLANS (Continue)

OPTION 3

The specific procedures for summoning rescue and emergency services for our workplace are:

_____
_____
_____
_____
_____
_____

Following are the permit spaces that require stand-by rescue services during entry. The rescue service will be available at the space during the entire entry procedure to ensure prompt entrant rescue.

Permit Spaces Requiring Stand-by Rescue Services	
Permit space:	**Stand-by rescue service name and telephone number:**

Resources

Example Confined Space Entry Programs

Use with the Confined Spaces book, Chapter 296-809 WAC

PERMIT-REQUIRED CONFINED SPACE PROGRAM REVIEW

For information only
Remove this box from your completed program

This section is **not** required if you only enter non-permit spaces or use alternate entry procedures

At least every 12 months we will conduct a review using canceled entry permits to identify any deficiencies in our program. We will conduct a review immediately if there is reason to believe that the program doesn't adequately protect our employees, such as the following situations:

- Unauthorized entry of a permit space
- Discovery of a hazard not covered by the permit
- Detection of a condition prohibited by the permit
- An injury or near-miss during entry
- Change in the use or configuration of the space

  or

- Employee complaints of permit space program ineffectiveness.

Corrective measures will be documented by revising the program. Employees will participate in revising the program, and will be trained on any changes.

If no permit space entry operations are conducted during the year, no review is needed.

Atmospheric Testing of Permit-Required Confined Spaces

Use with the Confined Spaces book, Chapter 296-809 WAC

Atmospheric testing of permit-required confined spaces is used so you can do both of the following:

1. Evaluate potential atmospheric hazards
2. Verify that acceptable atmospheric entry conditions exist

Evaluate Hazards

- Collect and analyze data on the atmosphere of your space using equipment that's sensitive enough and specific enough for any hazardous atmosphere that may arise. This will enable you to:
  - Develop appropriate entry procedures

    and
  - Maintain acceptable entry conditions.
- Have a technically-qualified individual perform, or at least review, the following:
  - Evaluate and interpret the data
  - Identify all serious hazards
  - Develop appropriate entry procedures

Note:

Examples of technically-qualified individuals include:

- WISHA industrial hygiene consultant
- Qualified industrial hygienist
- Qualified registered safety engineer
- Qualified safety professional
- Certified marine chemist

Atmospheric Testing of Permit-Required Confined Spaces

Use with the Confined Spaces book, Chapter 296-809 WAC

Verify that Acceptable Entry Conditions Exist

Verify that acceptable entry conditions exist by doing the following:

- If the space may contain a hazardous atmosphere, test for all potential contaminants.
  - Use the equipment specified on your permit, for the time specified by the manufacturer, to determine whether contaminants are within the range of acceptable entry conditions.
  - Measure for the time recommended by the manufacturer.
- Perform tests in this order:
  - First, perform a test for oxygen. Most combustible gas meters are oxygen dependent and will not provide reliable readings in an oxygen-deficient atmosphere.
  - Next, test for combustible gases. They present an immediate threat to life, through inhalation, fire, or explosion.
  - Last, if necessary, test for toxic gases and vapors.
- Record test results, such as the actual concentration, in the appropriate space on the permit.
  - When monitoring atmospheres that may be stratified, also do the following:
    - Test the atmospheric envelope at a distance of approximately 4 feet (1.22 m) in the direction of travel, and to each side.
  - If using a sampling probe, adapt the entrant's rate of progress to the sampling speed and detector response.